

TO: MRW — On (note date): 16 NOV 2 Pat. No. 6746591

Team Leaders Initials
INFO SUPPLIED BY: gub
OAC/LDRC Initials

SECOND REQUEST (DIFFERENT CORRECITONS), SUPERSEDE OR RECONSIDERATION
(OAC OR LDRC, USE A RED PEN FOR COMPLETING INFO, ON THIS COVER SHEET) (11/2002 cbn)

Team Leader, an Office Automation Clerk may assist you by supplying data from CofC Database (Current & History), PALM, and copies from Intranet, to determine type of request (second request, supersede, and/or reconsideration) and to determine if there were any errors made in decisions and/or publishing are attributable. Team Leader, check appropriate boxes below, key record (if necessary) and forward to JCWS, to order file and assign file to an LIE, to EXPEDITE.

Team Leader, DO NOT ORDER FILE.

MRD (for request attached to this cover sheet): / / (Team Leader have LDRC, stamp same MRD on 1050s.)

File Charged to (in PALM): Date Charged to Loc.: / /

Information re most recent record in CofC database (Check Current & History)

MRD: / / Examiner (LIE's initials):

Date Assigned: / / Turned In: / /

CofC Issued: / / CofC Denied: / / Updated: Y / -N Date: / /

Patent number listed on C of C listing in OG ((circle one) Y / N

CofC Issued for this record is attached to patent on Internet (circle one) Y / N

New/different correction(s) requested. Check Intranet or with RTIS. (circle one) Y / N

☐ Duplicate (same heading and corrections published/issued CofC on Intranet. (circle one) Y / N

☐ Substitute or corrected request. Locate the original request (check with JCWS and RTIS).

☐ Second Request (another) requesting new/different corrections or additional corrections. **TEAM LEADER, DO NOT ORDER FILE.** If necessary, call attorney/applicant for assistance in determining if new/different corrections. Team Leader, key new a record on: / / . Place and count with

CofCs keyed, same week, determine and note in to upper right hand corner if "P", "R", or "RTC".

Mark through any corrections on 1050, that were appropriately published; or JCWS assign to:

☐ Reconsideration ☐ Supersede ☐ Special CofC ☐ Erratum ☐ Expedite CofC

Team Leader, determine if a Request for a Corrected CofC (Supersede) or Reconsideration, due to error in decisions or keying, attributable to (check the appropriate box, below):

☐ RTIS
Keying Error

☐ LIE:
LIE Processing or
Decision Error

☐ OFFICE
Error in Entry of Document
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☐ ATTY.
1,323 Consideration
or Petition Required

If errors are attributable to LIE, use guidelines for appropriately notifying the LIE and recording errors (make copies supporting that the LIE made error, attach copies to this cover sheet, keeping copies for your records, and forward copies to CBN, at the end of each month).

☐ JW or OL, locate request for CofC published on: / / and return to:
(Circle OAC Initials)

☐ Team Leader keyed record on on: ☐ Post card Printed by Tasneem
(Team Leaders, give all second requests to Tasneem, to print a post card.)

☐ JCWS, order file and assign or reassign to LIE/to: / LIE, see your Team Leader for assistance.

Comments/Instructions:

☐ SEE REVERSE SIDE, FOR ADDITIONAL COMMENTS/INSTRUCTIONS

(Revised 12/15/2003 cbn) #4

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,746,591

DATED : June 8, 2004

INVENTOR(S) : Bo Zheng, Renren He, Girish Dixit

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover page in the Title, change "Voltate" to --Voltage--, to read "ECP GAP FILL BY MODULATING THE VOLTAGE ON THE SEED LAYER TO INCREASE COPPER CONCENTRATION INSIDE FEATURE";

The Abstract should read:

A method for electro-chemically depositing a metal onto a substrate. The method generally includes providing an electrolyte container configured to receive and maintain a fluid electrolyte therein, the electrolyte container having an anode disposed within the electrolyte container, providing a head assembly positioned above the electrolyte container, the head assembly including a wafer holder for supporting a wafer and a cathode, and positioning a wafer in the electrolyte container in contact with the fluid electrolyte, and applying a varying amplitude waveform to the cathode and anode in an electroplating process.

Column 1, line 2, in the Title, change "Voltate" to -- Voltage --;

Column 1, line 43, change "it's" to --its--;

Column 1, line 49, change "it's" to --its--;

Column 3, line 19, insert "to" after "configured";

Column 6, line 52, change "conducting" to -- conducting--;

Column 10, in Claim 12, line 66, delete "8" after "50";

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PATENT NO. 6,746,591

No. of additional copies

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 11, Claim 20 should read:

20. The method of claim 12, wherein the large magnitude voltage pulses are configured to supply a current density to the cathode of between about 8 milliamps per centimeter squared and about 50 milliamps per centimeter squared.

Column 11, Claim 21 should read:

21. The method of claim 12, wherein the large magnitude voltage pulses are configured to supply a current density to the cathode of between about 16 milliamps per centimeter squared and about 32 milliamps per centimeter squared.

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